

Properties

Sheet

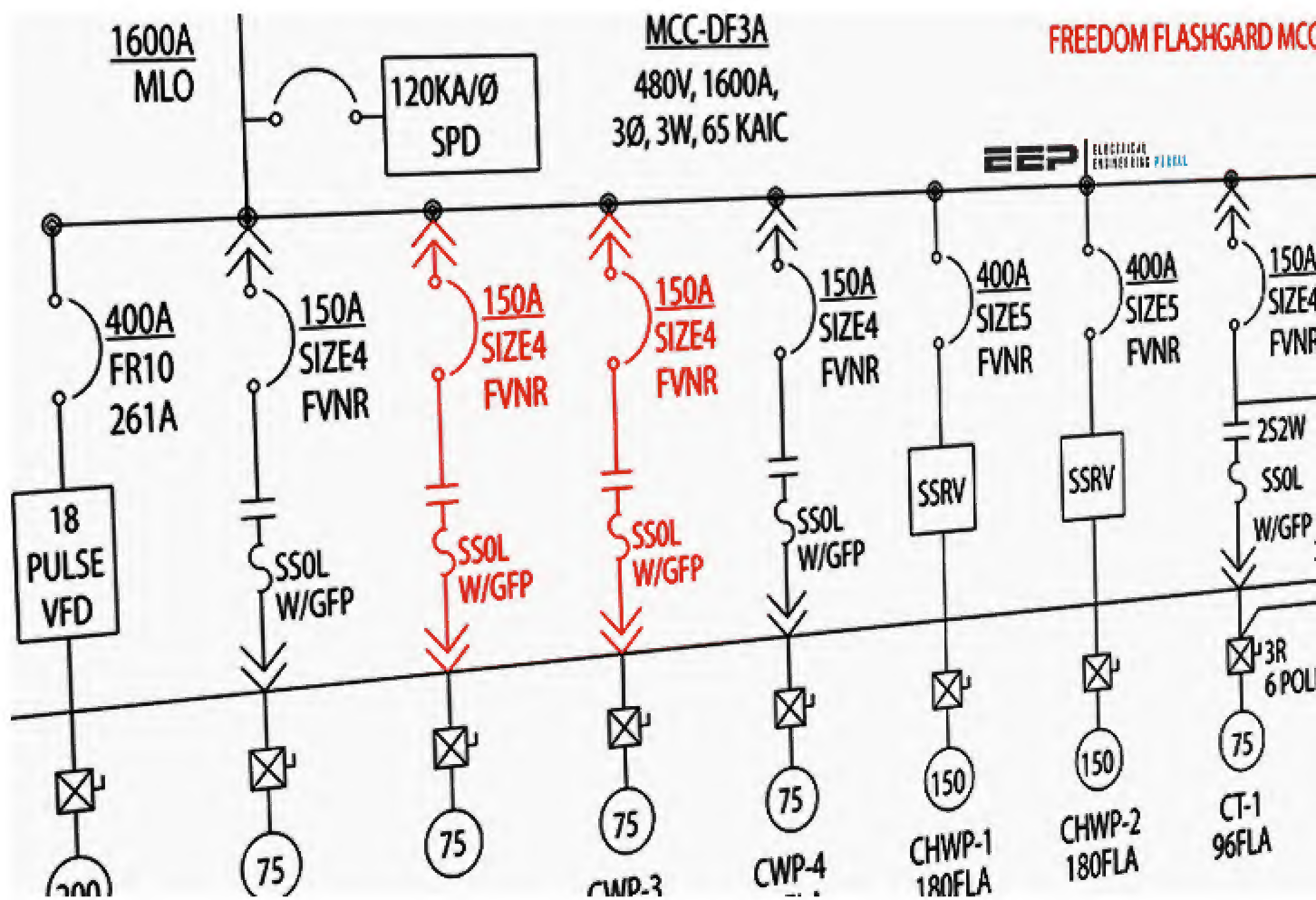
Sheets (2) Edit Type

Referencing Detail	
Current Revision Issued	<input type="checkbox"/>
Current Revision Issued By	
Current Revision Issued To	
Current Revision Date	
Current Revision Description	
Current Revision	
Approved By	Approver
Designed By	Designer
Checked By	Checker
Drawn By	Author
Sheet Number	
Sheet Name	Switchboard schematic
Sheet Issue Date	
MC Is Horizontal Schema	<input checked="" type="checkbox"/>
MC Page Number	
MC Panel Code	PB01
Appears In Sheet List	<input checked="" type="checkbox"/>
Other	
File Path	
MC Number of Pages	2
Guide Grid	<None>

[Properties help](#) Apply

Project Browser - Project1

- Sheets (Name and panel)
  - Plan drawing
    - V000 - Plan drawing
      - Floor Plan: 500 - Template view for sheet
      - Schedule: Duct Schedule
    - Switchboard schematic
      - Horizontal\_-90-01 - Switchboard schematic
      - Horizontal\_-90-02 - Switchboard schematic**
      - Vertical-01 - Switchboard schematic
      - Vertical-02 - Switchboard schematic
      - VerticalIP-01 - Switchboard schematic
      - VerticalIP-02 - Switchboard schematic
  - Families



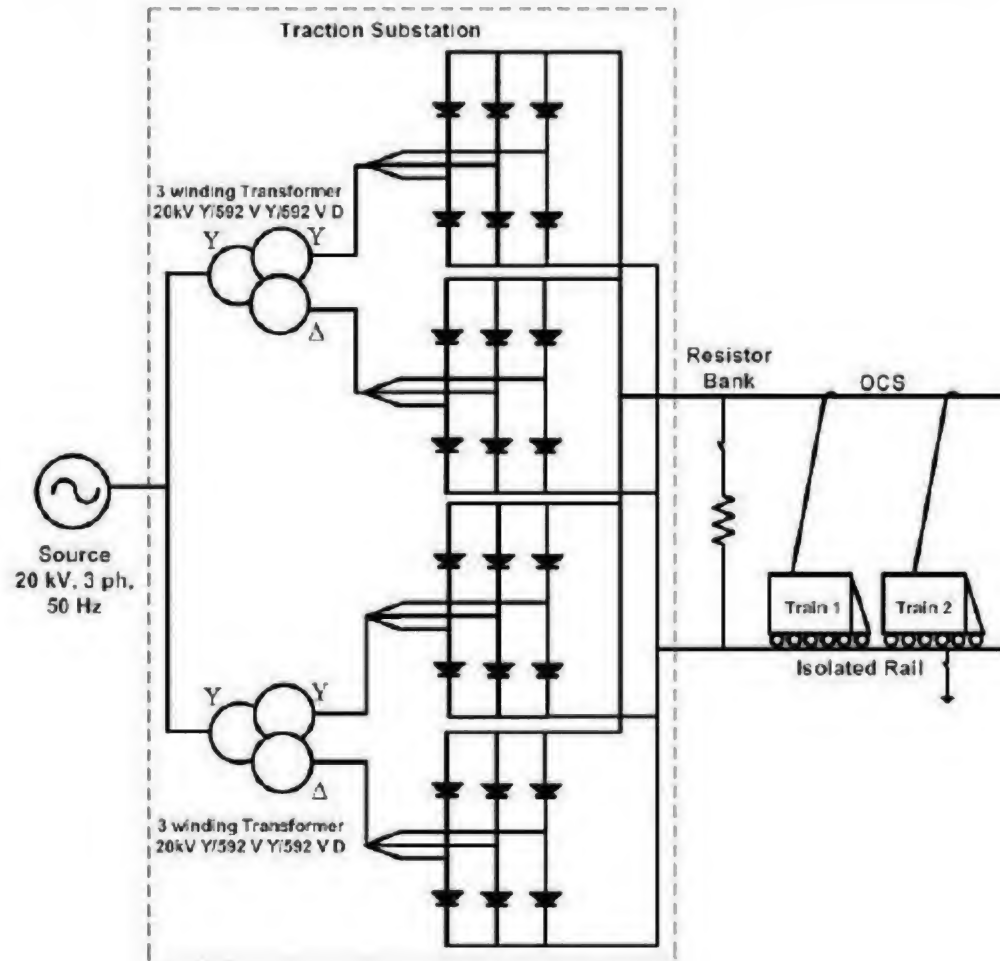
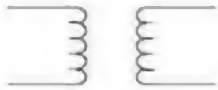
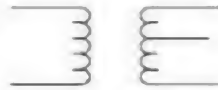


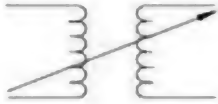
FIGURE A:  
SINGLE PHASE:



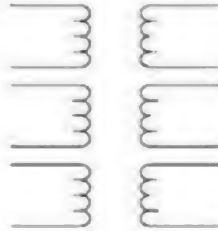
TAPPED:



ADJUSTABLE:



THREE  
PHASE:



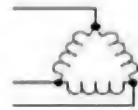
IRON CORE:



FIGURE B:  
THREE PHASE WYE  
(UNGROUND):



THREE PHASE  
DELTA:



THREE PHASE WYE  
(GROUNDED):



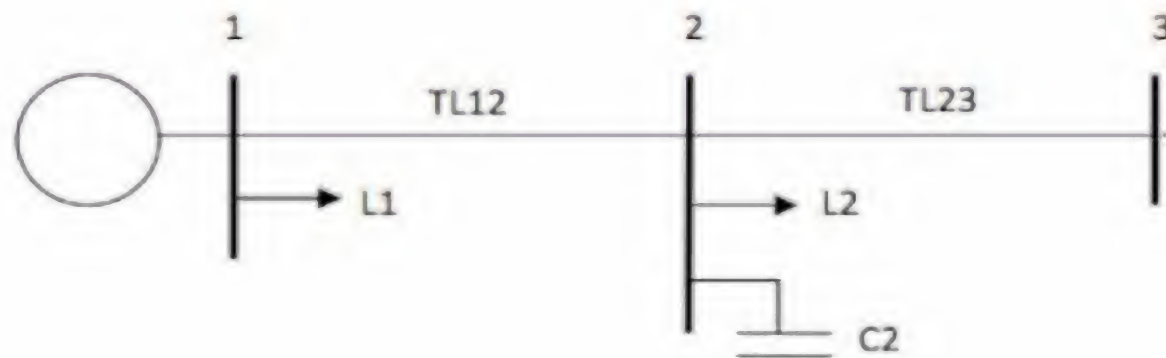
POTENTIAL:



CURRENT:



A single-line diagram and schematic for a power system are provided. The system consists of two transmission lines, TL12 and TL23, connected in series. A balanced parallel load is fed by two transmission lines from a source. The load is a balanced  $\Delta$ -connected impedance load of  $1.5 + j0.5 \text{ k}\Omega$ . The capacitor is connected. (HINT: Use per-phase analysis.)



- Determine the per-phase capacitance, in  $\mu\text{F}$ , to correct the load a
- Determine the line current magnitude, in A, delivered to the load
- If each TL12 is to supply 30% of the bus 2 load while TL23 supplies the remaining load, determine the required line voltage magnitudes at buses 1 and 2
- Determine the apparent power supplied by and power factor of the source



